

**ABSTRACT**

A photolithographic reduction projection catadioptric objective includes a first optical group G1 including an even number of at least four mirrors M1-M6; and a second at least substantially dioptric optical group G2 imageward than the first optical group G1 including a number of lenses E4-E13. The first optical group G1 provides compensative 10 axial aberrative correction for the second optical group G2 which forms an image with a numerical aperture of at least substantially 0.65, and preferably at least 0.70 or 0.75. Six mirror examples are shown.